



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,898	01/17/2002	Hegeon Kwun	090936.0445	1790

31625 7590 01/21/2004

BAKER BOTTS L.L.P.
PATENT DEPARTMENT
98 SAN JACINTO BLVD., SUITE 1500
AUSTIN, TX 78701-4039

EXAMINER

FAYYAZ, NASHMIYA SAQIB

ART UNIT	PAPER NUMBER
----------	--------------

2856

DATE MAILED: 01/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/051,898

Applicant(s)

KWUN ET AL.

Examiner

Nashmiya S. Fayyaz

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 2856

1. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, on line 10, "the same side" and on line 12, "the same direction" lack antecedent basis. On line 18, "the round-trip travel time" lacks antecedent basis and is unclear as to what the "time" is referring to. Further, the "travel time of the distance" is also not clear.

2. Claims 1-11 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Spisak et al US patent # 5, 591, 912.

As to claims 1-11, as best understood Spisak et al. disclose a method and apparatus for ultrasonic inspection of a conduit including directing a first ultrasonic pulse at the conduit and receiving reflection data, and directing a second pulse and receiving reflections, from the inside i.e. "same side" and sound travels inward comparing the received sounds (23/23') include sounds such as from a crack C or deposit (24/24'), (35/35') plotting the reflected sounds versus time and laying them over one another to determine overlap i.e. time-shifting and determining coincidence where overlap would be indicative of a defect, see co. 4, lines 21 et seq. Further, it is noted that Spisak et al. fail to disclose usage of a "long range wave" or detection of "peak" signals.

However, it is noted that "long range" is a relative term with no range provided in the claims.

Therefore, specification of the pulses disclosed by Spisak et al. as "long range" would have been a matter of design choice as a relative term based on the size of the conduit being evaluated. As to detecting of peak signals, it is well-known in the art of ultrasonic that peaks represent a signal

Art Unit: 2856

response as the received wave will have many components and the peak is generally termed the “reflected sound” as indicated by Spisak et al. Furthermore, it is noted that Spisak lacks a specification of the exact time shift time. However it is noted that Spisak et al. indicate the possibility of having the transceivers as not positioned equidistant and it is possible to time shift the signals to create overlap. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have determined the appropriate shift time to create the appropriate overlap necessary to detect a flow.

As to claim 3, see col. 6, lines 14-20. As to claims 4 and 5, usage of the frequency domain as an alternative to the time domain is old and well-known in the art of ultrasonics. Therefore, it would have been obvious to one of ordinary skill in the art of ultrasonics at the time of the invention to have employed the frequency domain as an equivalent alternative to the time domain as a matter of design choice known in the art. As to claims 6 and 7 note the establishment of a “baseline” in the reflected sound plots. As to claim 9, as best understood, Spisak et al. Refer to “data processing” to enhance distinction between noise and reflected sounds produced by defects which is known to be accomplished via thresholds. As to claim 10, the type of probe is not disclosed as “magnetostrictive”. However, magnetostrictive transducers is considered to have been a matter of design choice obvious to one of ordinary skill in the art at the time of the invention.

Art Unit: 2856

3. Applicant's arguments filed 12/10/03 have been fully considered but they are not persuasive. Applicant has argued that: Spisak teaches use of a first probe on one side of a flaw and another probe on the other side.

Such an argument is not found persuasive because the indication in the claims of "the same side" is not defined and lacks antecedent basis such that the Spisak probes being on the inner surface "side" of the flaw appears to meet the claimed limitation of being on the "same side" and the waves traveling in the "same direction" also indefinite as well, the direction being inward or upward.

4. Any inquiry concerning this communication should be directed to N. Fayyaz at telephone number (703) 305-4891.


N FAYYAZ/ac

1/13/2004


HEZRON WILLIAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800